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|-----------------|-------------|----------------------|---------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|

09/656,106 09/06/00 WAJIMA

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| M | EXAMINER |
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MMC2/0427

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

DATE MAILED:  
2834

04/27/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

## Office Action Summary

Application No.

09/656,106

Applicant(s)

WAJIMA ET AL.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2000 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

### Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Drawings***

- ✓ 1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "17" has been used to designate both external electrode and chip electronic component. Correction is required.
- ✓ 2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 12a, 13a. Correction is required.
- X 3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the printed circuit board mounting the chip electronic component via a conductive bond disclosed in claim 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 6-12, 14-18, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaida et al.

Kaida et al discloses a circuit having a lower surface, a pair of side surfaces, a plurality of external electrodes 117, 118 and external electrodes portion provided on the lower surface of the electric component with a narrow portion and wide portion (see figure 38). Also, the electronic component element includes a piezoelectric resonant element 41, a first case 115 and second case 116 substrate bonded to the piezoelectric element and each substrate has a recess 113, 114. Moreover, the width of the external electrode portion on the lower surface of the electronic component element is larger than the width of the external electrode portion formed on the side surface of the electronic component element (see figure 39).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-5, 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaida et al in view of Okamura.

Kaida et al discloses a circuit having a lower surface, a pair of side surfaces, a plurality of external electrodes 117, 118 and external electrodes portion provided on the lower surface of the electric component with a narrow portion and wide portion (see figure 38). Also, the electronic component element includes a piezoelectric resonant element 41, a first case 115 and second case 116 substrate bonded to the piezoelectric element and

each substrate has a recess 113, 114. Moreover, the width of the external electrode portion on the lower surface of the electronic component element is larger than the width of the external electrode portion formed on the side surface of the electronic component element (see figure 39).

However Kaida et al does not disclose that the electronic component comprises a circuit board and the electrodes can have the form of circular, rectangular and triangular shape.

On the other hand, Okamura discloses for the purpose of ensuring a stable manufacture of a resonator at constant resonance frequency, thus preventing the facing area between the internal electrodes from varying that the electrodes, a rectangular electrode 4 which can be also manufacture with a circular and triangular shape (column 6, lines 22, 23) and also discloses an electronic component mounted on a printed circuit board via a conductive bond (column 7, lines 11-16).

It would have been obvious to one having ordinary skill in the art to design an electronic component comprising electrodes, a piezoelectric element, substrates with recesses as disclosed by Kaida et al and to include a printed circuit board and make the electrodes with different shapes for the purpose of ensuring a stable manufacture of a resonator at constant resonance frequency, thus preventing the facing area between the internal electrodes from varying that the electrodes as disclosed by Okamura.

**Conclusion**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

April 25, 2001



Nicholas Ponomarenko  
Primary Examiner  
Technology Center 2800